

**Amendments to the claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of claims:**

1. (Currently amended) A method for integrating rework operations into a planning process comprising:

providing at least one rework Bill of Materials flow for use in conjunction with other Bills of Materials flow in a production planning process, the at least one rework Bill of Materials flow using inventory balance equations that describe a flow of rework Bill of Materials between inventory holding points;

forecasting rework parametric information associated with said at least one rework Bill of Materials flow; said rework parametric information including ~~at least one of:~~

yields;

cycle times;

~~capacities;~~ and

rework materials; and

applying the rework parametric information to the at least one rework Bill of Materials flow resulting in a manufacturing plan for rework operations; and

generating an integrated manufacturing plan that includes the manufacturing plan for rework operations~~utilizing said rework parametric information and said at least one rework Bill of Materials flow and the other Bills of Materials flow.~~

2. (Currently amended) The method of claim 1, wherein the rework parametric information further includes capacity constraints, the method further comprising:

balancing capacity constraints for said at least one rework Bill of Materials flow with capacity constraints for said other Bills of Materials flow.

3. (Original) The method of claim 2, further comprising a rework process, said rework process comprising:

executing said integrated manufacturing plan wherein said rework parametric information for materials not consumed during execution but determined to be reworkable are fed back into a second rework Bill of Materials flow operable for being consumed in a new integrated manufacturing plan.

4. (Original) The method of claim 1, wherein said yields include:

a percentage of product determined to have successfully passed testing.

5. (Original) The method of claim 1, wherein said cycle time includes:

an amount of time required to rework a product including wait time.

6. (Original) The method of claim 1, wherein said rework materials define materials created during a rework process.

7. (Original) The method of claim 1, wherein said integrated manufacturing plan is executed via a linear programming application.

8. (Currently amended) A storage medium encoded with machine-readable computer program code for integrating rework operations into a planning process, said storage medium including instructions for causing a computer to implement a method comprising:

providing at least one rework Bill of Materials flow for use in conjunction with other

Bills of Materials flow in a production planning process, the at least one rework Bill of Materials flow using inventory balance equations that describe a flow of rework Bill of Materials between inventory holding points;

forecasting rework parametric information associated with said at least one rework Bill of Materials flow; said rework parametric information including ~~at least one of:~~

yields;

cycle times;

\_\_\_\_\_ capacities; and

rework materials; and

\_\_\_\_\_ applying the rework parametric information to the at least one rework Bill of Materials flow resulting in a manufacturing plan for rework operations; and

generating an integrated manufacturing plan that includes the manufacturing plan for rework operation ~~utilizing said rework parametric information and said at least one rework of Bill of Materials flow~~ and the other Bills of Material flow.

9. (Currently amended) The storage medium of claim 8, wherein the rework parametric information further includes capacity constraints, the storage medium further comprising instructions for causing said computer to implement:

balancing capacity constraints for said at least one rework Bill of Materials flow with capacity constraints for said other Bills of Materials flow.

10. (Original) The storage medium of claim 9, further comprising instructions for causing said computer to implement a rework process, said rework process comprising:

executing said integrated manufacturing plan wherein said rework parametric information

for materials not consumed during execution but determined to be reworkable are fed back into a second rework Bill of Materials flow operable for being consumed in a new integrated manufacturing plan.

11. (Original) The storage medium of claim 8, wherein said yields include:

a percentage of product determined to have successfully passed testing.

12. (Original) The storage medium of claim 8, wherein said cycle time includes:

an amount of time required to rework a product including wait time.

13. (Original) The storage medium of claim 8, wherein said rework materials define materials created during a rework process.

14. (Original) The storage medium of claim 8, wherein said integrated manufacturing plan is executed via a linear programming application.

15. (Currently amended) A system for integrating rework operations into an advanced planning process comprising:

a server executing:

an advanced planning system;

an enterprise resource planning system; and

a rework system;

a technical data repository in communication with said server; and

rework parametric information comprising:

yields;

cycle times; and

capacities;

rework materials;

wherein said rework system implements:

providing at least one rework Bill of Materials flow for use in conjunction with other Bills of Materials flow in a production planning process, the at least one rework Bill of Materials flow using inventory balance equations that describe a flow of rework Bill of Materials between inventory holding points;

forecasting rework parametric information associated with said at least one rework Bill of Materials flow;

applying the rework parametric information to the at least one rework Bill of Materials flow resulting in a manufacturing plan for rework operations; and

generating an integrated manufacturing plan that includes the manufacturing plan for rework operations ~~utilizing said rework parametric information and said at least one rework Bill of Materials flow~~ and the other Bills of Material flow.

16. (Currently amended) The system of claim 15, wherein the parametric information further includes capacity constraints, said rework system further implementings:

balancing capacity constraints for said at least one rework Bill of Materials flow with capacity constraints for said other Bills of Materials flow.

17. (Original) The system of claim 16, further comprising a rework process, said rework process implementing:

executing said integrated manufacturing plan wherein said rework parametric information

for materials not consumed during execution but determined to be reworkable are fed back into a second rework Bill of Materials flow operable for being consumed in a new integrated manufacturing plan.

18. (Original) The system of claim 15, wherein said integrated manufacturing plan is executed via a linear programming application.